11 Publication number:

0 268 370 A3

(E)

EUROPEAN PATENT APPLICATION

(1) Application number: 87309045.0

(9) Int. Cl.4: H01L 49/00 , H01L 29/28

2 Date of filing: 13.10.87

Priority: 13.10.86 JP 243684/86
 24.12.86 JP 309431/86
 27.05.87 JP 133157/87

- Date of publication of application:
 25.05.88 Bulletin 88/21
- Designated Contracting States:
 CH DE FR GB IT LI NL
- Date of deferred publication of the search report:
 31.05.89 Bulletin 89/22
 \[
 \]

Applicant: CANON KABUSHIKI KAISHA 30-2, 3-chome, Shimomaruko Ohta-ku Tokyo(JP)

inventor: Eguchi, Ken
No. 201 Sanisu Atsugi 7-20, Sakae-cho
1-chome

Atsugi-shi Kanagawa-ken(JP) Inventor: Sakal, Kunihiro 1531-7, Shimotsuruma

Yamato-shi Kanagawa-ken(JP)

Inventor: Kawada, Haruki

D-201 Sukaitaun 3-8, Sakae-cho 2-chome

Atsugi-shi Kanagawa-ken(JP) Inventor: Matsuda, Hiroshi

No. 201 Puchihausu 141-7, Sachigaoka Asahi-ku Yokohama-shi Kanagawa-ken(JP)

Inventor: Morikawa, Yuko 231-7, Kamihirama Nakahara-ku Kawasaki-shi Kanagawa-ken(JP) Inventor: Nakagiri, Takeshi

18-2, Sendagi 3-chome Bunkyo-ku

Tokyo(JP)

Inventor: Hamamoto, Takeshi 4-1104, Wakabadai 1-chome Asahi-ku Yokohama-shi Kanagawa-ken(JP).

Inventor: Kuribayashi, Masaki 639-11, Higashi Naganuma Inagi-shi Tokyo(JP)

Representative: Beresford, Keith Denis Lewis et al BERESFORD & Co. 2-5 Warwick Court High Holborn London WC1R 5DJ(GB)

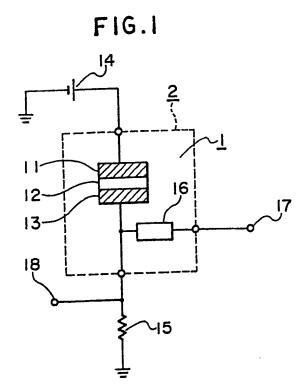
370 AS

Switching device.

(a) A switching device is characterized by having a periodical layer structure of an organic insulator between a pair of electrodes and having memorizability with respect to switching characteristics. The layer

structure is formed of an amphiphilic compound according to the LB method.

Xerox Copy Centre



EUROPEAN SEARCH REPORT

Application Number

EP 87 30 9045

				EP 87 30 90
		IDERED TO BE RELEV	ANT	
Category	Citation of document with of relevant p	indication, where appropriate, assages	Relevai	
X	APPLIED PHYSICS LE vol. 31, no. 9, 1s pages 553-555, New CHIANG: "A model o negative resistance organic thin film of figures 1,2; page	t November 1977, York, U.S.A.; CHUN f switching and e phenomenon in with dipoles". *	1,45,4	
Y	i dem		2-4, 27 30, 31, 35, 37, 38, 40- 43, 47,	
X	ELECTRONIC LETTERS vol. 21, no. 10, Ma 439-441, Stevenage, Britain; W. FULOP eswitching with memostearic acid." * wh	Herts, Great et al.: "Dielectric ory in thin films of	1,3,45 46,53	
Υ	idem	.o.o.	40.50	TECHNICAL FIELDS SEARCHED (Int. CL4)
			49-52, 54-58	
	EP-A-0 077 135 (QN RESEARCH LTD.) * abstract; figure 22-25 *		2-4,34 41,42, 47,48	B 05 D 1/12 G 11 C 11/22
	THIN SOLID FILMS vol. 134, no. 1-3, pages 89-99, Lausar BELBEOCH et al.: "E interdigitation in films." * pages 89,	langmuirblodgett	2,3,41 43,54, 55,58	
	The present search report has t	een drawn up for all claims		·
Place of search Date of completion of the search			Examiner	
BE	RLIN	20-02-1989	ງບ	HL A.
X : parti Y : parti docu A : techi O : non-	ATEGORY OF CITED DOCUME cularly relevant if taken alone cularly relevant if combined with an ment of the same category nological background written disclosure mediate document	E: earlier paten after the filin other D: document cit L: document cit	document, but p g date ed in the applicat ed for other reaso	ublished on, or



EUROPEAN SEARCH REPORT

Application Number

EP 87 30 9045

J	DOCUMENTS CONSID	ERED TO BE RELEVAN	T	
Category	Citation of document with indic of relevant passa	cation, where appropriate, ges	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
Y	FR-A-2 134 508 (ENER DEVICES) * figures 1-6 *	RGY CONVERSION	49-52, 56,57	
P,X	EP-A-0 232 829 (KANE KOGYO KABUSHIKI KAISH * abstract; page 54, claims *	·lA)	1-3,41, 42	
Y	DE-A-3 242 712 (BAY) * abstract *	ER)	27	
Y	JOURNAL OF MOLECULAR vol. 1, no. 1, July/pages 3-17, Chichest Great-Britain; M. SU"Langmuir-Blodgett f Towards Molecular El Review." * pages 14,	September 1985, er, Sussex, GI: ilms - a Course ectronics: a	30,35	
Y	JAPANESE JOURNAL OF SUPPLEMENTS 15th Conference, 198 Tokyo, Japan; M. SUG Monomolecular Films Applications." * abs column 2, paragraph	33, pages 181-184, AI: "Organic and Their stract; page 183,	31	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
Y	THIN SOLID FILMS vol. 133, nos. 1-4, pages 1-10, Lausann NAKAHARA et al.: "La films of ferrocene of long alkyl chains." 2 *	e, Switzerland; H. angmuir-Blodgett	37,38	
	The present search report has b	neen drawn up for all claims		
(i)	Piace of search BERLIN	Date of completion of the search 20-02-1989		Examiner JUHL A.
PORM Y:	CATEGORY OF CITED DOCUME particularly relevant if taken alone particularly relevant if combined with an document of the same category technological background non-written disclosure intermediate document	nt document, but ing date ited in the appli ited for other re	ng the invention t published on, or cation assons family, corresponding	



EUROPEAN SEARCH REPORT

Application Number

EP 87 30 9045

ategory	Citation of document with in of relevant pas	dication, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
Y	EP-A-0 067 691 (MAINDUSTRIAL CO.) * page 3, lines 4-2	TSUSHITA ELECTRIC	40	
		·		
		Juggar Jana Jana	Lari f	TECHNICAL FIELDS SEARCHED (Int. CL4)
	· -			
	The present search report has b			
Place of search BERLIN		Date of completion of the search 20-02-1989	JUH	Examiner A.
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure		NTS T: theory or pri E: earlier pater after the fill other D: document ci L: document ci	T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding	

THIS PAGE BLANK (USPTO)